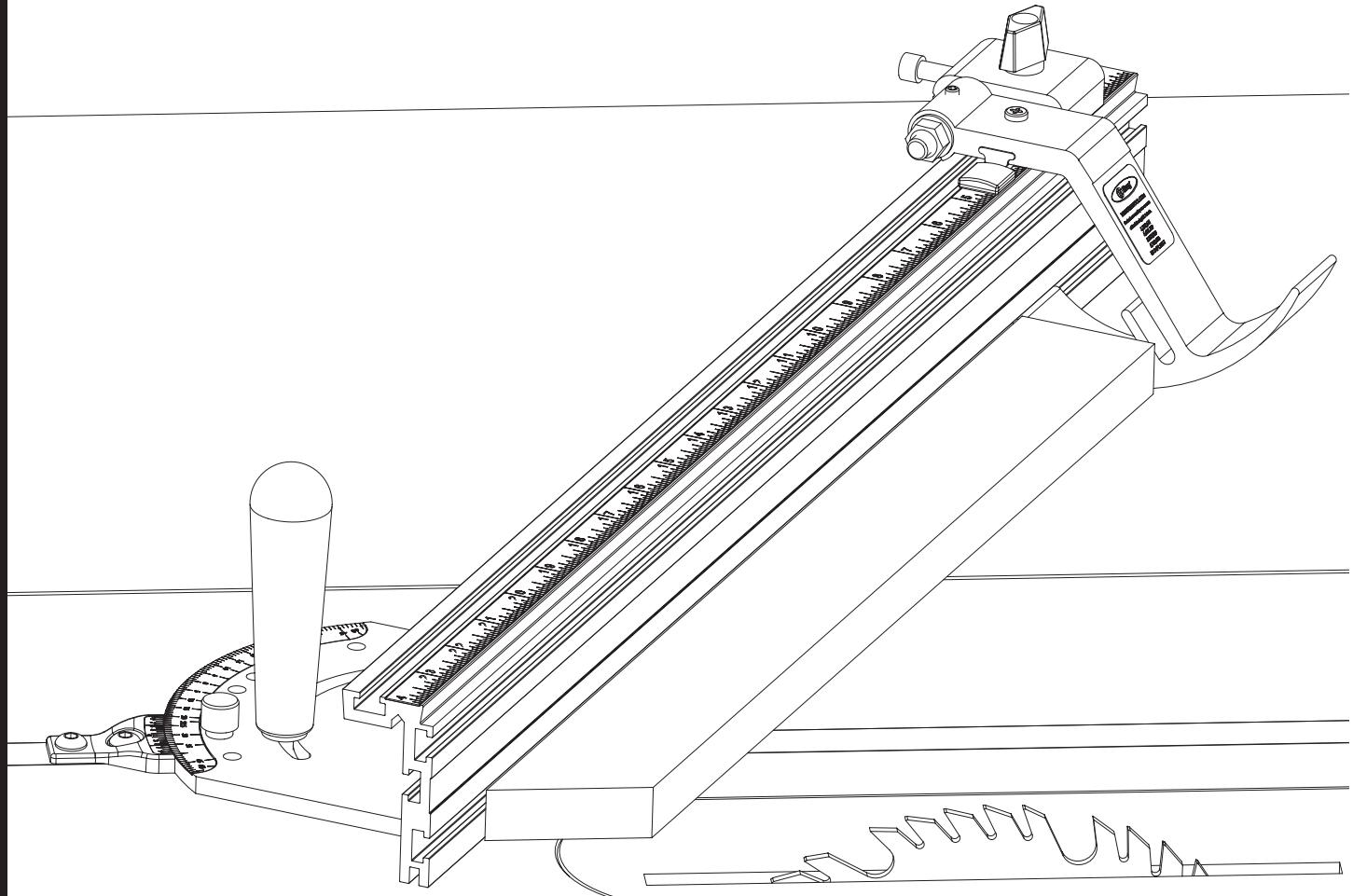




Precision **Miter Gauge**

INSTRUCTIONAL MANUAL



The Blue Mark of Quality.

Version 2005201
FT4032

Congratulations on choosing a Kreg Precision Miter Gauge! We have designed this tool to be the finest miter gauge available. It sets a new standard for accuracy and ease of use.

Be sure to read the instructions and the safety warnings completely before using this tool.

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Miter Gauge Safety Guidelines

Thank you for purchasing KREG components. All products have been designed to ensure safe and efficient operation when installed and used properly. We think you will agree that our miter gauge is the best currently available.

Warning

- Woodworking machines are dangerous and can cause personal injury if not used properly.
- Read safety instructions and operating instructions for your machine completely before using products. Using this system before understanding its safe and proper use could result in serious injury to the operator.
- Warning: Failure to follow these rules may result in serious personal injury.
- For your own safety, read instruction manual before operating the tool. Learn the tools application and limitations as well as the specific hazards peculiar to it.
- Keep all guards and kickback devices in proper place while using these products.
- If the standard guard must be removed, fabricate a guard to protect yourself from personal injury.
- Never turn your saw on before clearing the area of all unneeded materials and tools.
- Always wear safety glasses.
- Keep hands well away from blade when operating saw.
- Avoid awkward hand positions, where a sudden slip could cause contact with saw blade. Never reach in back of or around the saw with either hand to hold down the workpiece.

Kickbacks

Beware of kickbacks; they can cause serious injury. A kickback occurs when the workpiece binds up while being cut, causing it to twist, jump, or become airborne.

To avoid kickbacks:

- Always use sharp saw blades.
- Keep saw in proper alignment and good working condition.
- Never perform any "free hand" sawing. Work must always be held securely against the table and fence.
- Never rip narrow or long pieces in the crosscut position.
- Always support longer boards when cutting.
- When crosscutting, pull the saw forward just enough to sever the lumber.

Warranty

- Kreg components are fully guaranteed for one year from date of purchase.
- Kreg will replace or repair, at no charge to the customer, any product that fails within the warranty period.
- Kreg will service Kreg components beyond the warranty period at a reasonable cost to customer.
- Any neglect, misuse or usage of the Tools in a fashion not recommended by Kreg will void all warranties.

As with all machinery, there are certain hazards involved with operation and use of the machine. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result.

This system was designed for certain applications only. Kreg strongly recommends that this system NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application, DO NOT use the Tools until you have written Kreg Tool and we have advised you.

Safety Guidelines

To avoid injury, never adjust saw fence, drop stop, jig, fixture, or miter gauge while saw is running.

Make sure blade comes to a complete stop before removing or securing workpiece, changing workpiece angle or changing the angle of the blade.

Ground all tools. If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter lug must be attached to a known ground. Never remove the third prong.

Remove adjusting keys and wrenches. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it "on".

Don't use in dangerous environment. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well-lighted.

Keep children and visitors away. All children and visitors should be kept a safe distance from work area.

Make workshop CHILD PROOF with padlocks, master switches, or by removing starter keys.

Don't force tool. It will do the job better and be safer at the rate for which it was designed.

Use right tool. Don't force tool or attachment to do a job for which it was not designed.

Wear proper apparel. No loose clothing, gloves, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Nonslip foot wear is recommended. Wear protective hair covering to contain long hair.

Secure work. Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool. Don't overreach. Keep proper footing and balance at all times.

Maintain tools in top condition. Keep tools sharp and clean for best and safest performance.

Follow instructions for lubricating and changing accessories.

Disconnect tools before servicing and when changing accessories such as blades, bits, cutters, etc.

Use recommended accessories. The use of improper accessories may cause hazards.

Avoid accidental starting. Make sure switch is in "OFF" position before plugging in power cord.

Never stand on tool. Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

Check damaged parts. Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

Direction of feed. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

Never leave tool running unattended. Turn power off. Don't leave tool until it comes to a complete stop.

Drugs, alcohol, medication. Do not operate tool while under the influence of drugs, alcohol or any medication.

Make sure tool is disconnected from power supply while motor is being mounted, connected or reconnected.



KREG TOOL COMPANY
201 Campus Drive
Huxley, Iowa 50124

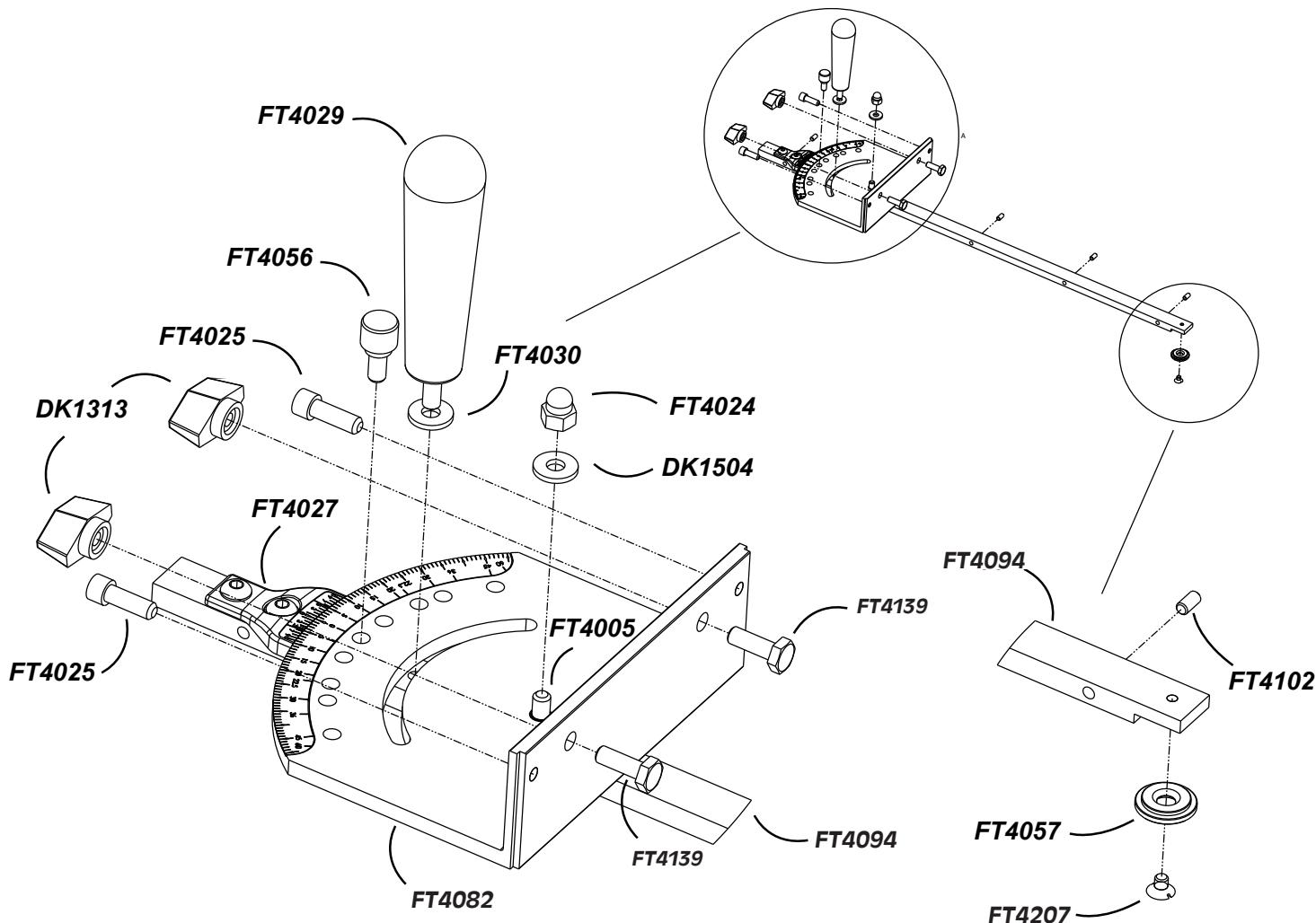
www.kregtool.com

800.447.8638



Precision Miter Gauge

- Part Number KMS7101

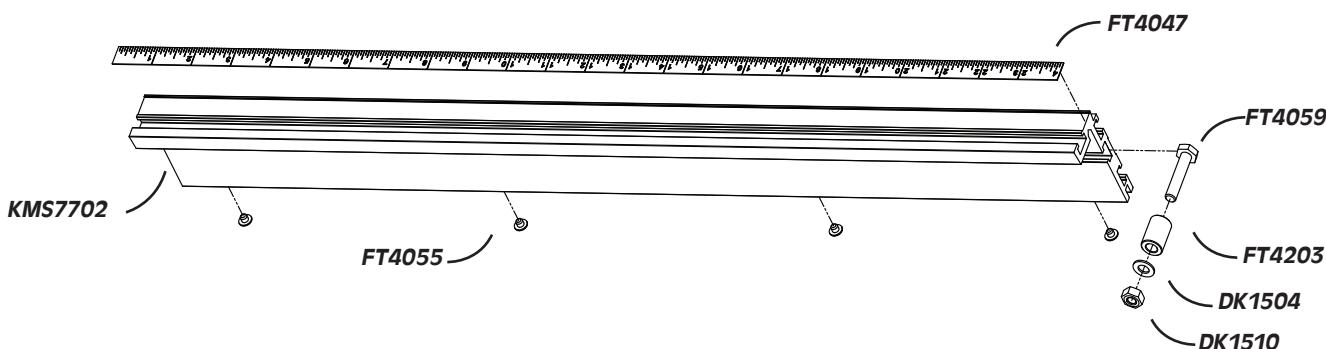
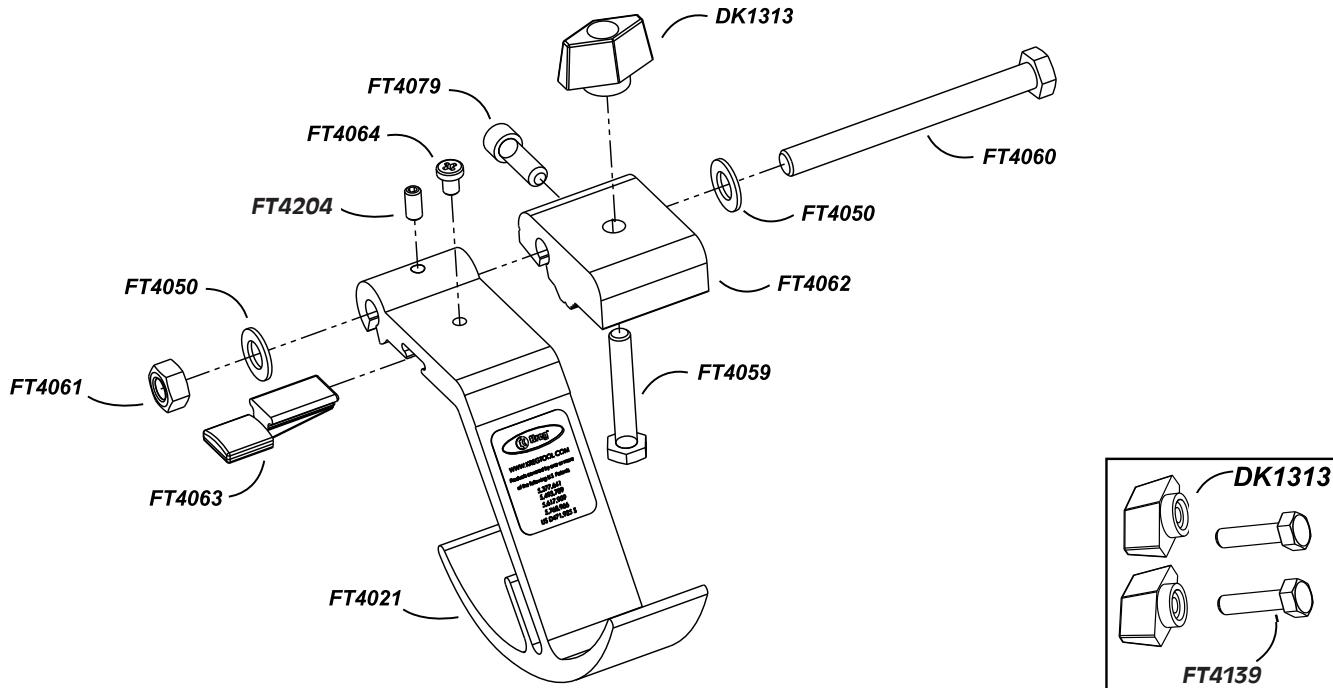


Part Number	Quantity	Description
DK1313	2	Black T-Knob
DK1504	1	1/4" Brass Washer
FT4082	1	Miter Gauge Head
FT4094	1	Miter Gauge Bar Extrusion
FT4005	1	1/4"-20 Brass Stud
FT4102	5	10-32 x 5/8" Nylon Adjusting Screw
FT4024	1	1/4" Lock Nut with Tip Cap
FT4025	2	1/4"-20 x 3/4" Nylon Hex Socket Screw
FT4027	1	Molded Vernier Scale Indicator
FT4029	1	Miter Gauge Handle
FT4030	1	1/4" Nylon Washer
FT4056	1	Brass Positioning Pin
FT4057	1	T-Slot Washer
FT4207	1	10-32 x 5/16" Flat Head Screw
FT4139	2	1/4-20 x 1" Hex Head Bolt



Miter Gauge Add-On System

- Part Number KMS7103



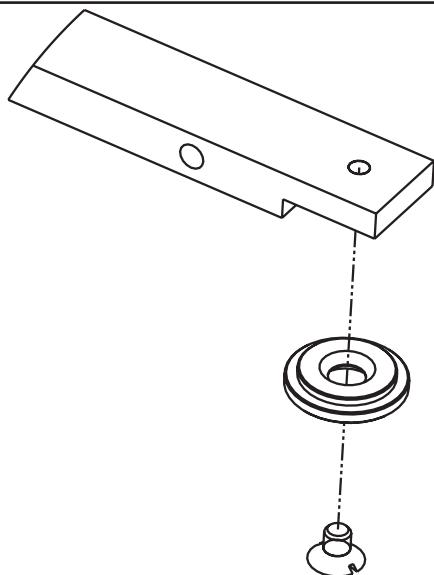
Part Number	Quantity	Description
DK1313	3	Black T-Knob
DK1504	1	Brass Washers
DK1510	1	1/4" - 20 Hex Nut
FT4021	1	Flipstop Arm
FT4047	1	4' Right to Left Reading Self-Adhesive Tape
FT4050	2	5/16" Delrin Washer
FT4055	4	Trak Bumper
FT4059	2	1/4-20 x 1-1/4" Hex Head Bolt
FT4060	1	5/16" - 24 x 3-1/4" Hex Head Bolt
FT4061	1	5/16" - 24 Nyloc Nut
FT4062	1	Stop Base
FT4063	1	Lens
FT4064	1	10-32 x 1/4" Nylon Screw
FT4204	1	10-32 x 3/16" Half Dog Point Set Screw
FT4079	1	1/4" - 20 x 1/2" Nylon Hex Socket Screw
FT4203	1	Positioning Stop for Miter Gauge Head
FT4139	2	1/4" - 20 x 1" Hex Head Bolt
KMS7702	1	Auxiliary Fence HD Trak

Install the T-Slot Washer

Optional: If your table saw has a t-slot style miter slot, you may choose to install the washer on the end of your bar. Some people like the washer, some don't. It's your choice if you install it. Use the supplied screw to tightly attach the washer to the end of your miter gauge.

Tip

If your saw has a t-slot that uses a different washer, remove the washer from the miter gauge that came with the saw. Install the washer on the Kreg Precision Miter Gauge bar using the screw provided with the Kreg Precision Miter Gauge.



Attach table slot washer to miter gauge bar.

Adjust the bar to the slot

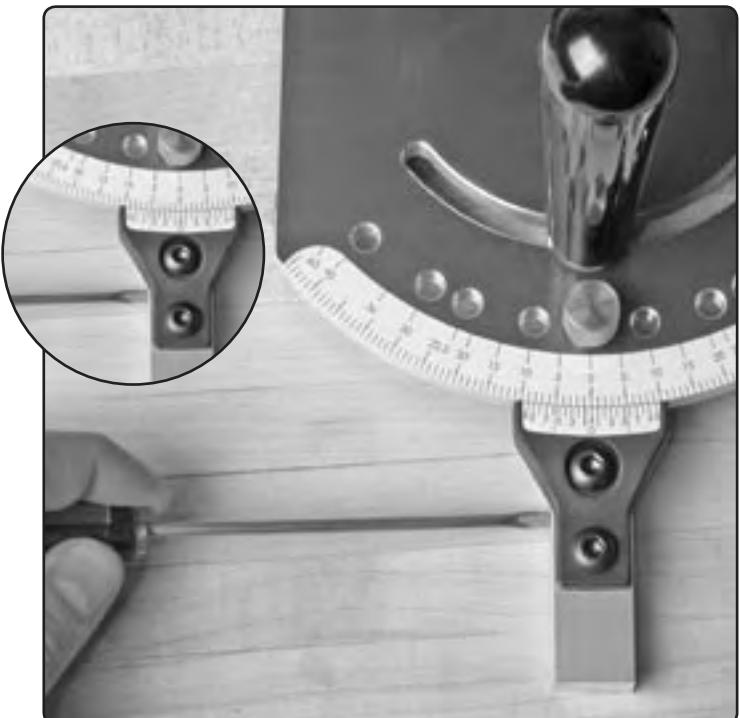
Miter gauge accuracy begins with a miter gauge guide bar that does not wiggle in the miter slot. It does not matter how good the scales are or how accurately the miter gauge is machined if the bar wiggles in the slot. If the bar wiggles, the miter gauge will not cut accurately. Therefore, it is very important to eliminate the wiggle.

The Kreg Precision Miter Gauge uses a patented bar adjustment system to custom fit the bar to the miter slot on your saw. There are five nylon plugs installed in the bar, that adjust with the turn of a small screwdriver.

You want to adjust these plugs to just "kiss" the edge of the miter slot. You want them touching, but not putting any pressure on the slot. If they touch, it eliminates the wiggle. However, if the plug puts pressure on the miter slot, the bar will not slide easily or it will stick.

Here's how to adjust the plugs:

- 1) Place the bar in the miter slot. Pull the miter gauge back so the end of the bar sticks out and the plug is still in the slot. Wiggle the bar to see if it moves.
- 2) If it does, pull the miter gauge back until the first nylon set screw clears the edge of the table.
- 3) Adjust the nylon screw by turning it clockwise with a small screwdriver.
- 4) Slide the bar forward in the slot & wiggle it to test the fit. If it still wiggles, slide the bar backwards and turn the nylon screw another 1/8 turn and test the fit again.



Turn the bar adjustment plugs to fit table saw slot.

- 5) Keep repeating this process until the fit is correct. Remember, you want the plug to just "kiss" the miter bar slot without exerting any pressure.
- 6) When the first plug is adjusted correctly, slide the bar backwards to expose the second adjuster & repeat the process described above.
- 7) To adjust the third, fourth and fifth plugs it is easier to slide the miter gauge forward off the front of the saw. Use the same adjustment procedure on each of these three plugs until all of the plugs are properly adjusted.

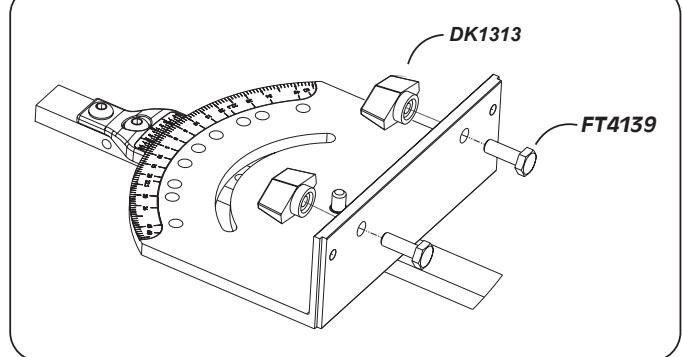
TIP

To make your bar slide even easier, wax your slot or spray on some dry lubricant. Don't use an oil or grease based lubricant, as it will attract sawdust.

Attach the Auxiliary Fence

Install the two provided 1/4" x 1" hex bolts with the plastic knobs through the non-threaded holes in the miter gauge and leave them loose.

Slide the auxiliary fence on so the heads of the bolts fit into the t-slot on the back of the fence. Tighten the plastic knobs to secure the fence into place.



Place the 1/4" x 1" hex bolts and plastic knobs through the unthreaded holes.

Attaching Fence Bumpers

There are 4 small white plastic bumpers (FT4055) included with the miter gauge. These bumpers are designed to press into the groove on the bottom of the fence. Once installed, the bumpers reduce drag and help to glide the fence across the top of the table saw.

NOTE

The following pages in this instructional manual assume that the miter gauge is being set-up in the left slot of the table saw. Reverse set-up procedures if using the right slot.

Install the scale

- 1) Make sure Auxiliary fence is clean & free of dirt & oil.
- 2) Begin peeling back the paper backing on the scale. Place the 1" mark on the end of the fence closest to the blade and stick the scale down. The exact placement of the 1" mark is not critical. You will adjust the scale later so that it reads accurately.
- 3) Cut the excess tape off at this time with a scissors or bend back 180 degrees and snap off.

Assemble the Stop

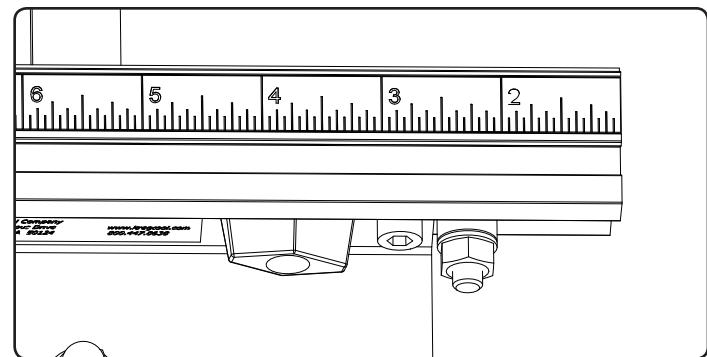
- 1) Push the 1/4" x 1-1/4" bolt up through the bottom of the Stop Base. Slide the head of the bolt into the groove in the top of the Auxiliary Fence and tighten with the Black T-Knob.
- 2) Place a 5/16" Delrin Washer on the 5/16" x 3-1/4" bolt and slide the assembly through the Stop Base and Flipstop Arm. Make sure the Flipstop Arm is on the same side of the Stop Base as the blade.
- 3) Place the second 5/16" Delrin Washer and the 5/16"-24 Nyloc Nut on the end of the 5/16" x 3-1/4" bolt and tighten until the Flipstop Arm is snug but still falls freely.
- 4) Insert the #10-32 Set Screw in the Flipstop Arm and tighten.
- 5) Insert the 1/4"-20 x 1/2" Nylon Hex Socket Screw in the back of the Stop Base and gently tighten until the Flipstop Arm falls slowly with gravity when lifted.
- 6) Locate the Lens in the Flipstop Arm and hold in place with the #10-24 x 1/4" Nylon Screw.

Set the Cursor

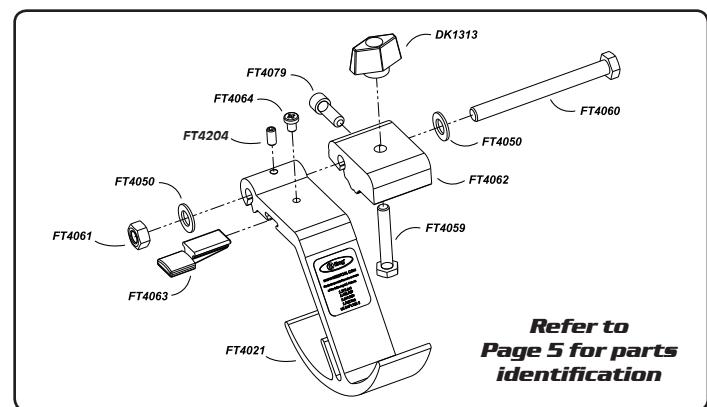
- 1) With the saw off, raise your saw blade.
- 2) Set the Miter Gauge at 0 deg. (used to cut a 90 deg.)
- 3) Adjust the cursor so it sits about 3/8" from the edge of the stop. The cursor set screw is on top of the stop arm.
- 4) Measure a piece of scrap wood. The exact length of this scrap is not important. A board about 12" works well because it gives you plenty of room to make some test cuts.
- 5) Set the stop so the cursor reads exactly the length of the scrap piece. The board in the example measured 12 1/8".
- 6) Put the scrap piece next to the stop. Loosen the auxiliary fence and slide it towards the blade so that the stop pushes the scrap piece of wood until it touches the carbide tips on the saw blade. Tighten the fence into position.
- 7) Swing the miter gauge to the 22.5 deg. position & check that the fence does not hit the blade. If the fence strikes the blade, you will need to set the cursor closer to the stop and start over from step 4.

Warning

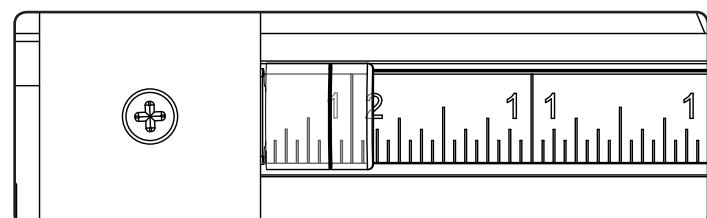
Always check the swing of the miter gauge with the blade stopped!



Place the 1" mark of the tape on the edge of the fence.

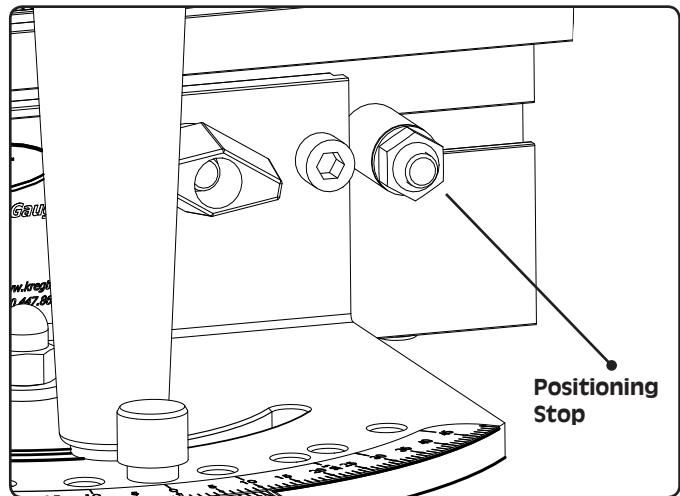


Measure a scrap board and set stop to that measurement

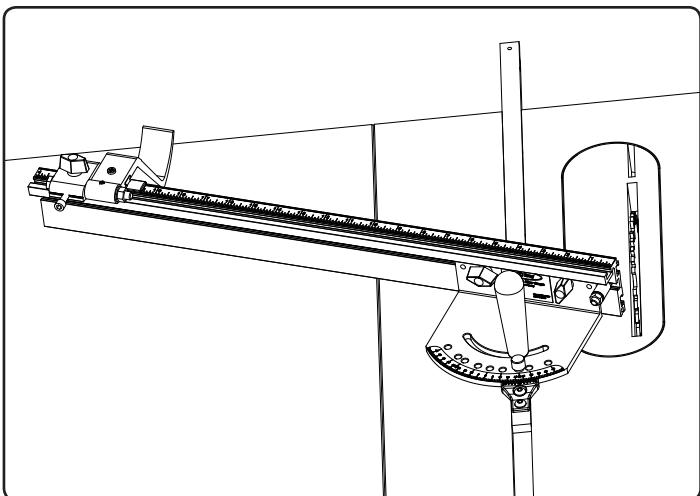


Cursor set to 12 1/8" on stop.

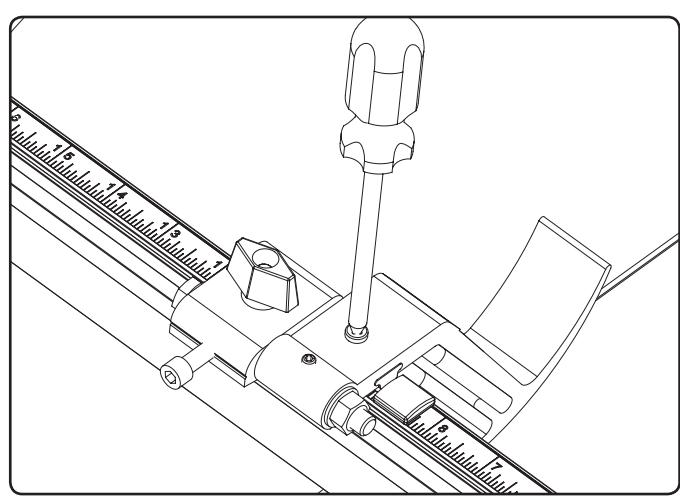
- 8) Fine-tune the cursor setting by moving the miter gauge back to 0 deg. Then move the stop in about an inch and cut a board to length. Measure the cut board.
- 9) Without moving the stop or the fence settings, loosen the cursor and adjust it to read this exact measurement.
- 10) Set the Positioning Stop tight against the right edge of the miter gauge head. The Positioning Stop allows you instantly return the fence to it's zero point where the scale reads accurately. This allows you to reposition the fence for bevel cuts, even remove it from the miter gauge, without losing your zero point.



Positioning block set against the right hand side of the gauge head.



Swing miter gauge to make sure fence clears blade at 45 degrees.



Make fine-tune adjustment to cursor lens with lens setscrew as shown.

Warning

Left Tilt Saws!

It is especially important to double-check the fence position before using the miter gauge when blade is tilted. Move the fence away from the blade when it is tilted towards the miter gauge. The scale is not accurate on beveled cut anyway. Always check to see if the miter gauge will hit the saw blade with the saw off!

The KREG Precision Miter Gauge offers two options for setting the cutting angle. You can either use one of the preset holes or use the scales.

Using the Preset Holes

Most of the time when you use a miter gauge you are cutting one of just a few different angles. Frankly, you will use it to cut a 90 deg. on a board a lot more than anything else. Therefore it is important that you can quickly and accurately set your miter gauge to these commonly used angles.

The Kreg Precision Miter Gauge has preset holes drilled at 0 deg., 10 deg., 22.5 deg., 30 deg., and 45 deg.

Simply drop the brass pin in the hole to set the desired angle. The brass pin is tapered so when it goes into the hole, it will set the angle exactly. Remember to lock your setting in place by twisting the handle down tight.

Using the Scales

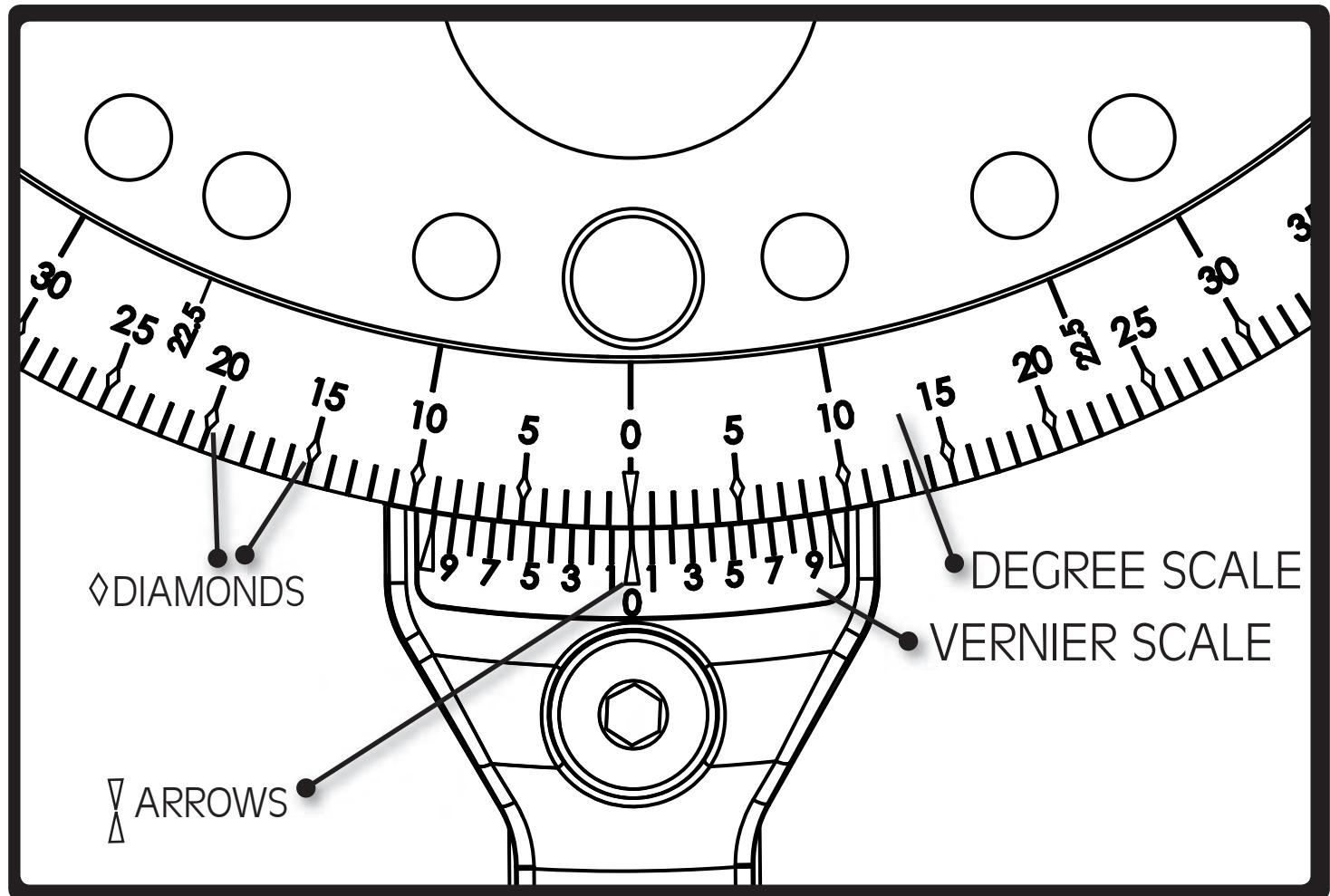
Below is a key to understanding the markings on the scales

Degree Scale - Used to set angle to nearest degree.

Vernier Scale - Used to set angle to nearest 1/10 degree .

Arrows at 0 deg. - The arrows at 0 degrees make it fast and easy to locate the center of the scale.

Diamonds - There are diamonds every 5 degrees. The diamonds make it quick and easy to find the degree setting you need.



Setting the Angle using the Scale

To set an angle that is not preset, you need to use the scales. Just loosen the handle, line the desired angle up with the 0 mark on the Vernier side of the scale, and tighten the handle.

8 degree setting in example at right.

Using the Vernier Scale

Occasionally you will need to set the angle to the nearest 1/10 deg.

The Vernier scale lets you do that quickly and accurately.

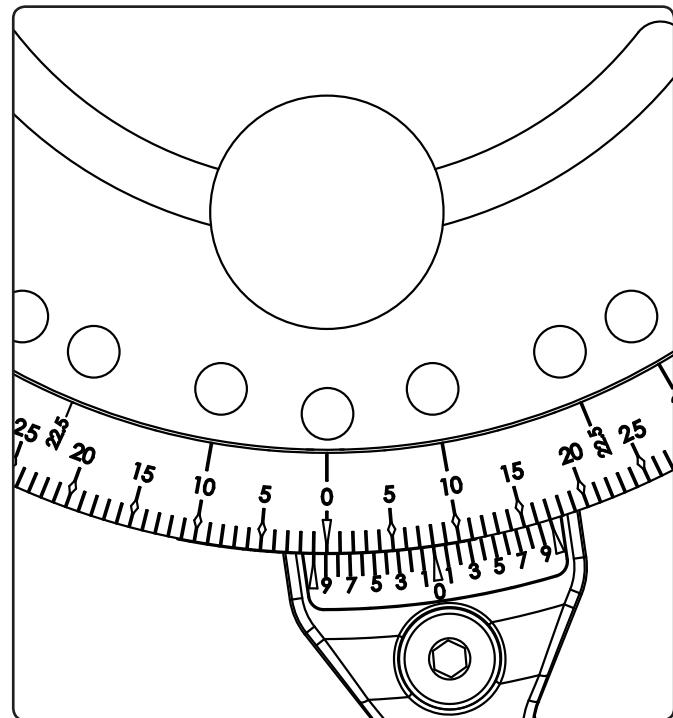
Each black line represents 1/10 deg. and is used as the reference point to set the number of tenths of a degree it represents. The use of a Vernier scale is easier taught by example than trying to explain how it works.

For example, to build a seven-sided picture frame you need an angle of 25.7 deg.

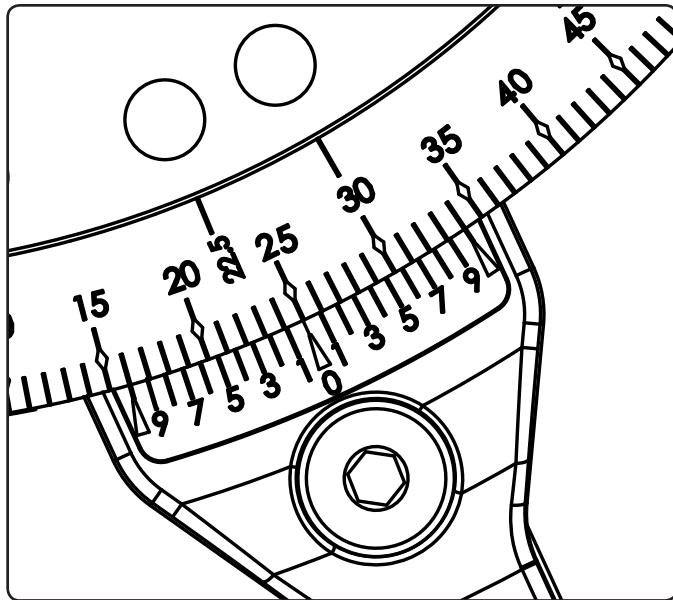
- 1) Set the angle to 25 deg. Note we are using the left side of the scale in the example.
- 2) Find the seven line on the left side of the Vernier scale.
- 3) Move the miter gauge until the very next degree line to the left matches the seven line - so it looks like one continuous line across the gap. Note how no two other lines match exactly.

Tip

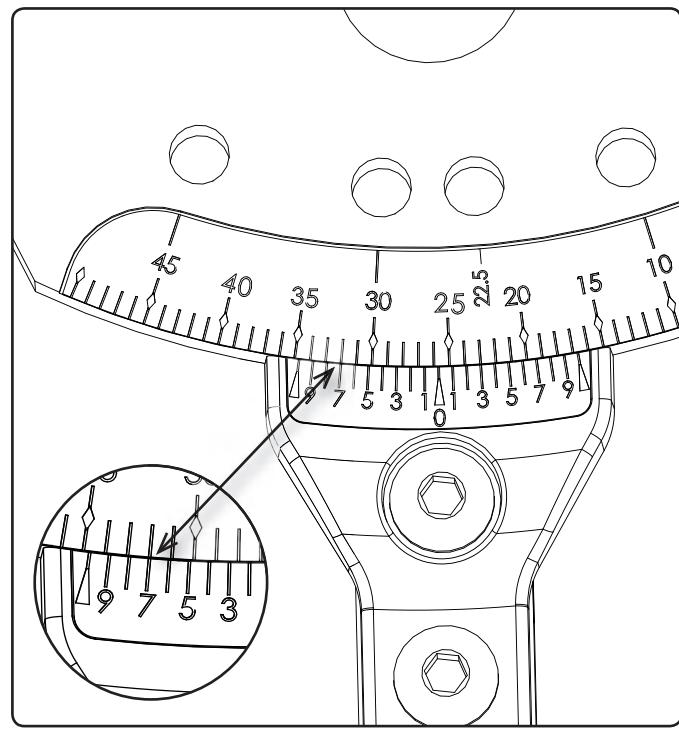
A common error in using a Vernier scale is lining up the Vernier scale to the nearest degree mark instead of the next larger degree. You can always double check your setting by looking at where the zero mark is located. At 25.7 deg., the zero mark is about 3/4 the way to 26 deg.



Angle set to 8 degrees.



Scale set to 25 degrees.



Vernier scale set to 25.7 degrees.

Note the 7 lines are aligned

The Vernier scale is set at the factory. However, if you knock it out of alignment, it can be easily reset. For the Vernier scale to read accurately, it needs to be both accurately aligned and correctly spaced from the degree scale on the miter gauge head. Here's how to do it yourself.

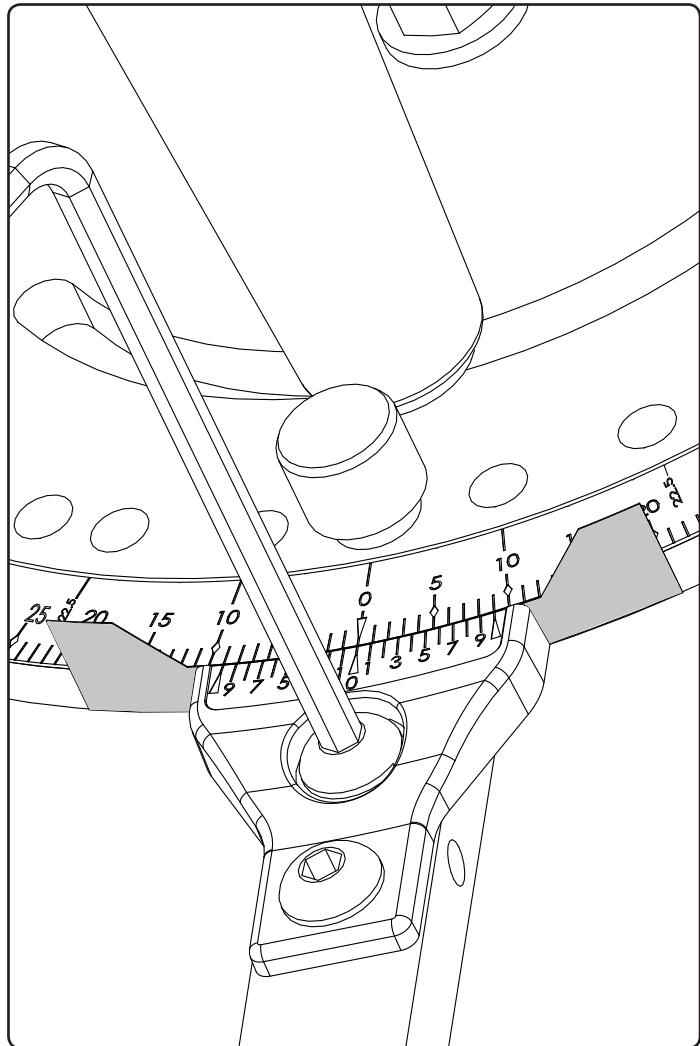
- 1) You will need a 5/32" Allen wrench and a 0.005" shim to correctly space the Vernier scale. Standard 20 lb copy machine paper measures close enough to 0.005" to work as our shim. Cut a sheet of standard copy machine paper into this shape to make the shim.

Make the shim 2 1/2" long and cut it low enough (1/4") in the center so it doesn't block your view of the scale.

Remember to leave the "handles" on the ends so you can easily remove it from the miter gauge after you have adjusted the scale.

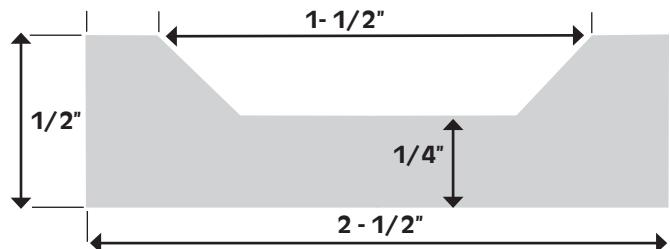
- 2) Put the pin in the 0 degree hole.
- 3) Loosen the allen screws holding the Vernier scale in place.
- 4) Insert the paper shim between the Vernier scale and the miter gauge head.
- 5) Push the Vernier scale up tight to the paper shim and align the two arrows at 0 deg. To fine-tune the setting, look at the arrows at the far left and far right of the vernier scale. They should be precisely aligned with the lines at 9 deg. on each side. Checking all three settings helps eliminate parallax errors when you are setting the scale.
- 6) Tighten the Allen screws. Double check that nothing moved when you tightened the screws. Remove the shims.

Finished!



Resetting Vernier scale with homemade shim.

SHIM DIAGRAM



Reality Check

Before taking the time to set the micro-adjust, do a reality check to see if the 1/100 deg. will really show. 1/100 deg. is a very fine adjustment and is seldom necessary on most woodworking projects. 1/100 deg. is only a 0.001" gap over a 5.7" length of cut.

Example #1: 7 Sided Jewelry Box

The angle you need for a seven sided box is 25.71 deg. The sides of the box are 1/2" thick. Micro-Adjusting for the 1/100 deg. would eliminate a gap of less than 1/10,000." Forget it, a gap that small is meaningless. Just set your miter gauge to 25.7 deg. and go to work confident you will have a gap free project.

Example #2: 21 Sided Top for 7 Sided Jewelry Box

Now let's assume you are going to put a very fancy top on the 7 sided jewelry box. You are using 3 different woods on each side to create a burst of color, which creates 21 segments.

The angle you need for 21 segments is 8.57 deg. Each segment is 12" wide. Micro-adjusting the 7/100 deg. will eliminate a gap of 0.015" on each joint. This calculation assumes each joint will have an equal gap.

In real life, the gaps will be much larger. When you clamp the segments together, the clamps will usually push two sides tightly together, leaving twice the gap on the next joint. That is a gap of .029". You can put six sheets of paper into a gap that large. Six sheets of paper is a gap that will definitely show.

Many woodworkers will try to fill gaps like this with glue or putty. But if you can build pieces that fit together tightly, people will definitely notice the difference!

Summary

Take the time to set the micro-adjust on wide boards, especially if you need to add 3/100 deg. or more. Don't bother on thin pieces or if you only need to add 1/100 deg.

How the Micro-Adjust Works

The micro-adjust mechanism works by changing the spacing between the fence and the miter gauge. For every 0.001" of space you add, you increase the angle 1/100 deg. You add the space by turning a nylon screw that pushes the fence away from the miter gauge.

Design Note

The micro-adjust is designed so that the nylon screws line up with the t-track slot. You have to turn the nylon screws a long way before they actually engage the auxiliary fence and start to change the angle. This design minimizes the chances you will accidentally add an adjustment to the angle you are setting.

Setting the Micro-Adjust

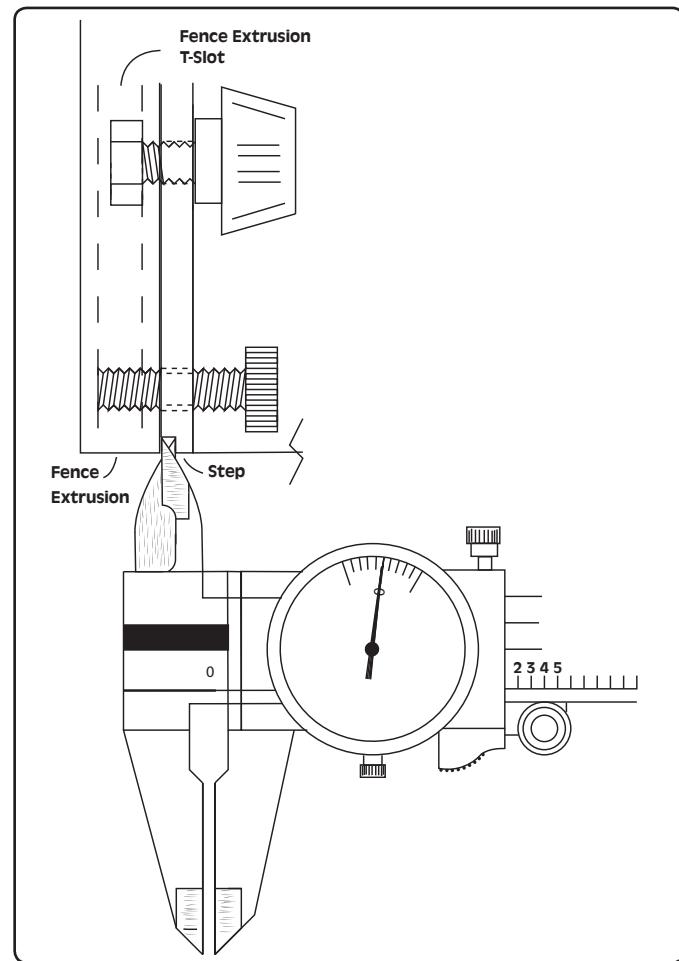
When using the micro-adjust, it is much easier to set your angle on the left side of the scale, as pictured above. If you must use the right side of the scale, you will need to remove the positioning block from your fence and you will be moving the fence a lot that may affect the accuracy of your micro-adjust setting.

Setting the Micro-Adjust using Feeler Gauges

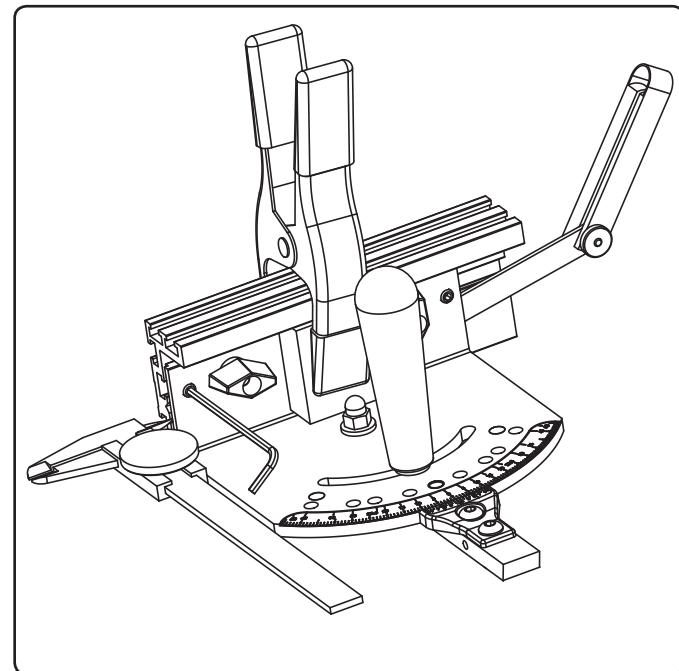
- 1) Set the angle to the nearest 1/10 deg.
- 2) Place a small block of wood on the miter gauge & use a spring clamp to hold the fence in position.
- 3) Loosen the plastic knobs that attach the auxiliary fence.
- 5) Turn out the plastic micro adjuster screw until it pushes against the fence. You may need to use a 3/16" Allen wrench to turn the micro adjuster screw against the pressure of the spring clamp. Keep turning it until you can just insert the correct size feeler gauge between the fence and the miter gauge.
- 4) Tighten the plastic knobs.
- 6) Try to remove the Feeler Gauge. If it just slides out, you are done. However, you may have to slightly loosen the plastic knob next to the micro adjuster and turn out the micro adjuster screw to get the exact setting.

Setting the Micro-Adjust using a Dial Caliper

- 1) Set the fence even with the edge of the miter gauge.
- 2) Set the angle to the nearest 1/10 deg.
- 3) Place a small block of wood on the miter gauge & use a spring clamp to hold the fence in position.
- 4) Loosen the plastic knobs that attach the auxiliary fence.
- 5) Place a dial caliper in the notch and zero the scale.
- 6) Turn out the plastic micro adjuster screw until it pushes against the fence. Keep turning it until the dial indicator reads the correct spacing. You may need to use a 3/16" Allen wrench to turn the micro adjuster screw against the pressure of the spring clamp.
- 7) Tighten the plastic knobs and remove the spring clamp.



Setting micro-adjust with dial caliper.



Set micro-adjust with dial caliper or feeler gauge.



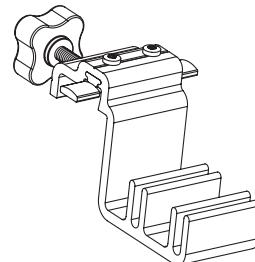
PRECISION MEASURING SYSTEMS

Measure Once, Cut Once.

Be sure to visit www.kregtool.com to get all the details surrounding our entire product line.

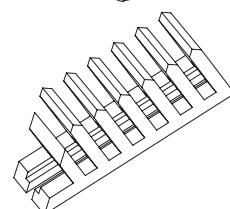
Solid Production Stop - KMS7800

This "Rock Solid" stop sets the distance from the end of the board and the saw blade for amazing cutting accuracy and repeatability from either side of the blade. Perfect for repetitive, high-production applications.



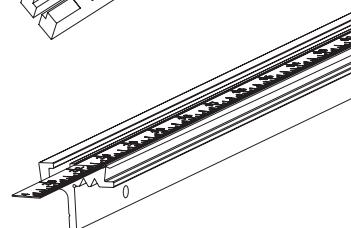
"Perfect Miter" Attachment - KMS7831

This attachment to the KREG stops references a 45 degree mitered board on two surfaces, greatly increasing the cutting accuracy and repeatability of the mitered cut. Great for picture framing.



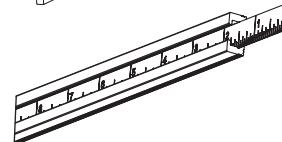
Top Trak - KMS7712 (2') & KMS7714 (4')

Top Trak mounts to the top-side of a shop-made 3/4" thick fence. Accepts the head of a standard 1/4" bolt. Features a self-aligning L-shaped mounting foot for easy installation to a shop-made fence. The top of the trak contains a recess for attaching a 1/2" wide self-adhesive measuring tape sold separately. Trak sections can be butted together to increase fence length.



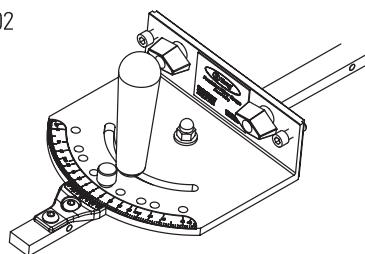
Mini Trak - KMS7506

Mini Trak can be used to produce countless types of woodshop jigs and fixtures such as taper jigs, cutoff sleds, and more. Bottom of trak accepts a 1/2" wide measuring tape to increase accuracy. T-slot will capture the head of any 1/4" hex bolt. Sold in a 4' length with tape. Easily cut to length with a hacksaw.



Precision Miter Gauge System - KMS7102

Cut perfect miters consistently with the Precision Miter Gauge System. Features factory calibrated accuracy from a gauge head that is machined on a computerized milling machine. A 24" Heavy Duty Trak section with patented Flipstop and self-adhesive measuring tape is included.



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